

Keystone Pipeline Project

Winterization Plan

November 2008

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1. INTRODUCTION

The Keystone Pipeline Project (Project) is in the process of constructing the first two spreads of the Project through North Dakota and northern South Dakota consisting of approximately 265 miles of pipeline, as well as civil work associated with preparing several pump stations, preparation of new pipeyards and cleanup of existing pipeyards.

Pipeline construction has progressed well over the past several months. However, persistent rain and saturated soil conditions this fall have slowed construction work. This inclement weather will prevent completion of some construction activity and especially right-of-way restoration efforts this season.

Final ROW cleanup, topsoil replacement and reclamation cannot be successfully completed during periods of saturated or frozen soil conditions. As a result, final cleanup and reclamation efforts will be delayed along substantial portions of the Keystone ROW until spring/summer 2009. Any area of the right-of-way on which construction and restoration activities are not completed will be stabilized for the winter. This effort is designed to prevent topsoil loss, reduce the potential for erosion, and reduce the potential for sedimentation and other impacts to resources and to landowners.

Keystone's contractors will continue to work toward completion where the work can proceed efficiently and without adversely impacting local roads and landowners. Keystone will continue to communicate with affected landowners about construction and reclamation progress and discuss activities that will not be completed this year.

Keystone has developed this Winterization Plan (Plan) for the following purposes:

- to provide guidelines for addressing the special considerations and concerns associated with construction, ROW cleanup and reclamation efforts conducted during less than optimal conditions,
- to identify steps required to stabilize the ROW for the winter,
- to describe the temporary erosion control measures Keystone will implement in areas where final cleanup and reclamation activities are postponed until spring 2009, and
- to describe the monitoring program that Keystone will implement during the winter and spring months.

The Plan also describes the approach Keystone will follow in the spring of 2009 to complete final construction and cleanup/reclamation that was not completed during the winter due to poor soil and ROW conditions.

2. WINTERIZATION PLAN

The following activities will be completed to stabilize the ROW during the winter period.

- The trench will be backfilled as completely as possible with subsoil. Any areas of open trench will have safety fence securely installed around the open trench.
- Grade cuts will be restored to the extent practicable and waterbars will be installed across the ROW to direct run-off away from the ROW.
- Gaps will be cut into topsoil and subsoil piles and through the berm over the ditchline to allow drainage across the ROW.
- Equipment mats will be removed from water courses to allow high spring flows. Stream banks and an area on either side of stream and wetland crossings will be stabilized and mulched, where needed.
- Wetland areas where mats are removed will be cleaned up to the extent possible and disturbed soils adjacent to streams and wetlands will be mulched, where needed.
- Waterbars, berms and erosion/sediment control measures will be installed to minimize erosion along the ROW and deposition of sediments off the ROW.
- In areas where final cleanup and reclamation efforts have not been completed, the ROW will be left in a roughened condition to reduce the potential for erosion during snowmelt or significant rain events.
- Environmental inspectors may determine the need for additional erosion and sediment controls, where necessary.
- Keystone's environmental or construction inspector will document areas of the ROW where final cleanup has been completed and areas where only rough cleanup has been completed.

2.1 TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

Temporary erosion and sediment control measures will be installed as needed in areas where final cleanup and reclamation efforts have not been completed. The goal of the temporary erosion and sediment control measures is to protect resources crossed by the project and to stabilize the ROW to the extent feasible until final cleanup and reclamation can be completed in the spring.

Temporary erosion and sediment control measures will include installation of waterbars, application of mulch and/or temporary seeding, and installation of sediment control measures where necessary as determined by the environmental inspector. These areas will be monitored until completion of ROW reclamation and stabilization is achieved, as noted below. The erosion and sediment controls will be maintained and repaired as necessary.

2.1.1 Waterbars

Temporary waterbars will be constructed on slopes greater than five percent where final cleanup and installation of permanent erosion and sediment control measures have not been completed. The temporary waterbars used to winterize the ROW will be constructed to the specifications and spacing found in the Project's CMRP.

2.1.2 Temporary Mulch

Temporary mulch will be applied to the ROW at a rate of 3 tons per acre¹ on slopes greater than five percent and adjacent to waterbodies and wetlands where a slope exists adjacent to the resources, and where final cleanup and reclamation have not been completed. The temporary mulch will be crimped in where possible, or will be track-walked into the ROW where ground conditions or slopes do not make the use of a crimping tool effective or feasible. If significant snow cover or frozen conditions exist on the ROW, the decision to apply mulch to the ROW will be determined by the environmental inspector.

2.1.3 Seeding

Temporary seeding will be applied as necessary to areas where the topsoil has not been replaced where identified by the Environmental Inspector. Due to the late season, no germination or growth is anticipated until the spring thaw. The project's environmental inspectors will maintain logs of areas where permanent and temporary seed mixtures are applied.

2.1.4 Sediment Barriers

Sediment barriers (i.e., silt fence, straw bales, earthen berms) will be installed and maintained across the ROW at waterbodies, wetlands, and paved road crossings where determined necessary by the environmental inspector. These structures will be maintained during the winter as noted below.

2.2 ACCESS ROAD USAGE

The access roads currently approved for use by the project will continue to be used during winter construction. Keystone will maintain all access roads in accordance with applicable permit and landowner requirements.

2.3 TEMPORARY BRIDGES

During construction, temporary bridges and mats were installed across waterbodies and wetlands. The bridges and mats installed across waterbodies and drainages will be removed before the Contractor leaves the ROW in the winter, except in limited situations where the existing bridge adequately spans the stream and would not be in danger during high flow spring run-off. The bridges may be stockpiled adjacent to the crossings. Temporary bridges may need to be reinstalled to access the ROW for spring 2009 cleanup and reclamation activities.

¹ Heavier mulch rates (3 tons per acre) will be used for temporary erosion control due to the limited success anticipated with the crimping effort.

2.4 LANDOWNER COMMUNICATION PLAN

A letter will be sent to the landowners to notify them that their property will be monitored during the winter and that final cleanup and reclamation will be completed in spring and summer of 2009. Keystone's land agent or SD liaison will be available to address landowner concerns throughout the winter and following spring/summer.

Keystone is committed to working cooperatively with landowners and local governments. Keystone land agents will seek to meet with each affected landowner in an effort to ensure that the winterization of the right-of-way on each parcel incorporates the landowner's needs for access and accommodates natural water flows. In addition, Keystone will be paying additional damages to cover land that is unavailable for use into the 2009 season.

2.5 AGENCY COMMUNICATION PLAN

Keystone will communicate with appropriate agencies regarding the suspension of construction and clean-up activities; Keystone's plan for winterizing and monitoring the ROW during the winter; and the plan for completing construction and clean-up activities in the spring/summer of 2009.

3. WINTER MONITORING

The following section provides details of the monitoring and erosion control maintenance efforts that Keystone will implement during the winter of 2008/2009. Keystone's winter monitoring efforts are designed to identify, evaluate, and repair erosion control structure damage and areas of significant erosion in a manner compatible with available access during winter months.

ROW conditions in the winter are often very saturated and muddy, or frozen and snow covered, resulting in limited vehicle and equipment access to many areas of the ROW for inspection and repair activities. During these periods, except for emergency situations where significant resource damage may occur, repairs to eroded areas will be limited to hand work only. Accessing the ROW with equipment during these periods could result in significant additional damage to the ROW such as destabilizing previously stable areas, and increasing the likelihood for further erosion. Later in the spring, access to the ROW will improve with drying soil conditions, allowing equipment access to the ROW. The winter monitoring efforts will balance the potential for resource impacts associated with erosion or ROW damage with impacts that may be incurred when accessing the ROW with equipment in saturated conditions.

3.1 WINTER MONITORING PROCEDURES

The Keystone ROW will be inspected on a regular basis by Keystone personnel throughout the winter months to identify areas where erosion control measures are damaged and where corrective actions are required to address developing erosion problems. Damage to existing erosion control measures will be noted and repaired, as appropriate.

The extent of winter monitoring efforts will be based on weather conditions and precipitation amounts (i.e., significance and duration of periods of thaw and run-off). Monitoring will be prioritized according to the presence of sensitive resources. Once the soil becomes frozen and snow covered, the need for frequent monitoring of the ROW will be reduced or eliminated since ROW conditions will either be hidden from view or stabilized in a frozen state. When the snow cover melts or the ground thaws, the potential for erosion will increase and ROW monitoring and repair efforts will increase.

Critical areas with a high potential for problems during the winter will be identified by the environmental inspectors and will be given increased attention during winter monitoring efforts. These critical areas (erosion prone areas where sensitive resources are nearby) and other areas where final reclamation has not been completed will be monitored more frequently over the winter.

Winter monitoring efforts will be accomplished primarily via aerial surveys of the ROW and by walking to more critical areas. The ROW will be flown on a monthly basis with a helicopter to review the condition of erosion control measures and the ROW. Areas requiring repair will be identified and evaluated for the appropriate corrective actions.

3.2 EROSION CONTROL RESPONSE AND REPAIR ACTIVITIES

Damaged erosion control structures, eroded areas of the ROW, and damage to the ROW noted during aerial surveys will be verified on the ground by Keystone's construction representative or environmental inspector if access to the site is feasible. In most cases, repairs to erosion control measures and damaged ROW areas will be conducted with hand labor. Except for extreme situations, equipment will not be used for repair activities due to poor access conditions and likely collateral damage to the ROW that would result. In some cases, repairs will be deferred until the spring remediation period. Deferred areas may include areas of ditchline settlement, eroded areas where no sensitive resources are impacted, areas where access and repairs are not feasible, or where damage from accessing the site would outweigh the benefits of correcting the issue during the winter.

Keystone will retain local contractors to conduct erosion control and ROW damage repair activities. The contractors will maintain a supply of sandbags, strawbales, silt fence, and tools to allow for rapid response to erosion control issues and severe ROW damage repair needs. Areas requiring repair or remedial activities will be repaired as soon as feasible after the issue is identified. Keystone will coordinate with the local contractor to mobilize crews to the locations requiring repairs.

3.3 WINTER MONITORING PERIOD

The winter monitoring period will extend from the time construction and ROW winterization efforts have been terminated until spring cleanup efforts begin in late May or early June 2009.

As noted above, there will be periods during the winter when the monitoring effort will be suspended due to frozen or snow-covered conditions on the ROW.

3.4 CONTACT NUMBERS

The table below identifies key contacts for the winter period. Land agents will be communicating directly with affected landowners. In addition, the Keystone Landowner Hotline will continue to operate throughout the winter and through the duration of spring/summer final construction and clean-up activities.

Name	Role	Location	Contact Number
Steve Craycroft	Environmental Compliance Manager	Kansas City, MO	(816) 880-4881 (office) (970) 219-0184 (mobile)
Buster Gray	Pipeline Construction Manager	Kansas City, MO	(816) 880-4881 (office)
Jessica Greven	Project Environmental Coordinator	Kansas City, MO	(816) 880-4881 (office)
Sara Metcalf	SD Liaison	Huron, SD	(888) 375-1370
McClure Regan	ND Land Supervisor	Valley City, ND	(406) 788-5626 (701) 652-2118
Paul Kleist	SD Land Supervisor	Huron, SD	(605) 461-9005

4. SPRING AND SUMMER FINAL CONSTRUCTION AND RESTORATION

Keystone is committed to ensuring long-term stability and revegetation success along the restored construction ROW. To support this effort and to address final restoration and winter damages to the ROW, Keystone will thoroughly review the ROW in the spring of 2009. The goal of the spring remediation effort will be to identify any storm or winter damage that may have occurred on the ROW, and to evaluate the condition and continued need for temporary erosion and sediment control measures that remained in place over the winter. Following initial review of the ROW, Keystone will repair damaged areas of the ROW, complete final cleanup and reclamation, re-seed and re-mulch areas as necessary, and remove silt fence or other erosion control structures that are no longer needed.

4.1 RESTORATION AND REMEDIATION PROCEDURES

Keystone's project management team composed of environmental, ROW, and construction representatives will begin inspecting the ROW on the ground in approximately mid-to late-April (depending on ROW conditions). This team will document areas where additional work or cleanup/restoration is needed. Any construction debris missed during the fall reviews will be identified. A thorough checklist of all items will be developed. The final checklist will include items that were identified during the winter monitoring period, but were deferred and not addressed at that time due to various constraints.

In approximately mid-May to early June, or once ROW soils are adequately dry to allow access along the ROW, the contractors will mobilize equipment and personnel to complete final construction and restoration activities and to address the checklist items. All spring remediation activities will be conducted in full compliance with Keystones' permits and regulatory conditions.

Temporary timber mat stream-crossing bridges will be installed to provide access to areas requiring final restoration and spring remediation. These stream-crossing bridges will only be in place for a short period of time and will receive limited use. Care will be taken to keep these bridges clean of mud and soil during their use.

Agricultural areas that did not have the necessary cleanup completed (e.g. rock-picking, decompaction, seeding, etc.) will be completed during the spring and summer period. The applicable landowner and project requirements will be followed.

4.2 INSPECTION

Keystone will maintain environmental inspector(s) on each construction spread throughout the final construction, restoration and spring/summer cleanup period. The environmental inspector will coordinate with the agencies, as necessary, regarding spring remediation activities. The environmental inspector will work closely with the construction inspectors, the contractor, and Keystone's staff to ensure that spring/summer cleanup activities remain in full compliance with project permits and conditions.

4.3 TRAINING

All project personnel involved with 2009 final construction, restoration and spring clean-up activities will participate in a focused environmental training program that will discuss environmental requirements specific to the spring/summer construction and cleanup effort. The environmental inspector on each construction spread will conduct this environmental training program.